in 1899, and also in Sequoia. Going from San Francisco to Del Monte and Monterey, California, he found the same thing in living Lawson's cypress on the grounds at Del Monte, and especially abundant in the broken branches and recently-felled trees of the Monterey cypress in the original grove at Cypress Point. He thinks that the original home of the species is in the ancient grove, but it has been distributed further north with the tree, which has been extensively planted for hedges and as an ornamental tree. We have here another example of a beetle which in its original host plant and distribution is not destructive, but becomes so under different environments and with change of habit. He also found *Dendroctonus valens* working serious damage to the Monterey pine, and associated with it a number of species of Tomicus, Pityophthorus, etc., which appear to be causing considerable trouble. He mentioned also the timber which had been destroyed by fire, mentioned by Mr. Schwarz at a previous meeting, and spoke of the great number of beetles breeding in the injured trees and spreading their depredations into living ones. Returning from Monterey on the Santa Fe R. R., he visited Williams, Arizona, to examine a trouble there reported by Mr. Schwarz, which was causing the death of a considerable number of pine trees. This was found to be caused by *Dendroctonus approximatus*, Dietz., and also by two undescribed species of Dendroctonus, which are closely allied to *D. frontalis*. He found also that among the Pinon on the rim of the Grand Canon, and between there and Williams, individual trees were dying and infested with Tomicus and other bark beetles.

(To be continued.)

NEW ORIENTAL ALEURODIDÆ.

BY A. L. QUAINTANCE, COLLEGE PARK, MD.

Aleurodes Marlatti, n. sp.

Egg.—Size about .1 mm. × .2 mm., exclusive of stalk, which is quite short, holding egg in upright position on leaf; regularly elliptical in outline. Colour, dirty yellowish brown, as seen on leaf; under transmitted light, yellowish. Shell without markings or sculpturing of any kind.

Larva.— Broadly elliptical. Colour, except in first stage which is yellowish, brownish to brownish black, varying in some specimens to an iridescent blue black; in later stages, margined all around with a short, rather squarely-trimmed, white, waxy secretion, from the marginal wax

tubes. Margin of case plainly crenulated, the incisions between wax tubes shallow and acute, but furrowed somewhat entad, giving a fluted marginal area. Abdominal segments distinct, thoracic segments moderately so. There is a slight, rounded medio-dorsal ridge along abdomen. Vasiform orifice triangular; operculum subcordate; lingula well developed, subcapitate distally, the stalk rather narrow. A pair of moderate, whitish setæ project caudad from caudal end of case. Size of larva, probably in second stage, .63 mm. × .5 mm.

Pupa Case.— As seen on leaf, shiny jet black and considerably convex when fully developed. There is a short, uniform, rather squarely-trimmed, glassy waxen fringe all around from the marginal wax tubes. On dorsum of abdomen there is an interesting "top-shaped" outline, formed by a narrow, more or less continuous line of whitish waxy secretion. The cephalic end of the figure originates along first abdominal segment, the sides curving outward and caudad, but some narrowing, the lines passing on either side of the vasiform orifice, caudad of which they coalesce more or less, the figure terminating in an acute point at caudal end of case. Lines of wax along the sutures of the abdominal segments extend out laterally from the more central, top-shaped figure, the whole forming an interesting and characteristic pattern. On cephalic end of case there is an irregular ellipse of wax, marking approximately the head region of the pupa. This dorsal secretion is most evident in the more mature individuals, and may be more or less absent in the younger forms. There is a very distinct suture all around, which separates from the body proper the pronounced fluted marginal rim. This latter is inclined to the surface of the leaf at an angle of about 45 degrees. Size variable, but about 1.35 mm. × 1.1 mm., roundly elliptical in form. Abdominal segments distinct, and thoracic moderately so. On cephalic end of case the transparent, subreniform "eye spots" very distinct. Vasiform orifice triangular, subacute caudad. Operculum subcordate; lingula difficult to make out, but probably as in larva. From caudal end of orifice a distinct furrow extends back to caudal end of case. Margin crenulated all around, the incisions between wax tubes shallow and acute; on latero-cephalic margin of case, on each side, a single tubular pore, noticeably distinct from adjacent wax tubes. Pupa case of general type of *A. quercus-aquaticæ*, Quaint., from Florida.

Adult.— ♀. Body yellowish, with sutures mostly blackish. Length about .83 mm.; fore wing, 1.2 mm. × .56 mm.; antennæ and legs usual,

Fore wings with two irregular, broken bands of reddish, each crossing wing about equidistant on each side of caudal flexure of vein. There is also a small central spot, almost caudad of flexure, and a more or less evident spot at tip of vein. A small, irregular spot also occurs caudad of veinlet, near base of wing.

♂. Very like female, but smaller. Penis and valves of genitalia rather slender, sickle-shaped and acute.

Specimens on orange; collected by Mr. C. L. Marlatt, Hakato, Japan, May 21, 1901. Adults bred out by Mr. Marlatt. This species was also taken at Kumomoto, Japan, by Mr. Marlatt, on May 17, 1901. Described from numerous specimens of eggs, larvæ and pupa-cases. Adults described from a few imperfect females and one male in balsam mounts. Types in U. S. National Museum.

Aleurodes spinifera, n. sp.

Egg.—Exclusive of stalk, .2 mm. long by about .1 mm. wide; yellowish, curved, and marked with rather minute, closely-set polygonal areas. Stalk quite short, holding egg in more or less upright position on leaf.

Larva.—Regularly elliptical, appearing brownish on leaf, varying to black, with evident, but short, cottony fringe of wax all around from marginal wax tubes; dorsum without secretion. Size, probably in second stage, about .4 mm. × .3 mm. Margin distinctly crenulated all around, incisions between wax tubes short and acute. Abdominal segments quite distinct, thoracic less so. Dorsum set with very strong, heavy spines as follows: a row on each side about equidistant between the median longitudinal dorsal line and margin of case, of seven spines each or fourteen in all. Eight of these occur on the abdomen and six on the thorax. More centrally on the thorax are six equally developed spines in pairs. Vasiform orifice, which is somewhat elevated on a subconical, truncated protuberance, subcircular in outline; operculum subcircular to subcordate, nearly filling orifice. Lingula short, nearly obsolete.

Pupa Case.—As seen on leaf, with reflected light, jet black, considerably convex, the strong, dark spines plainly evident. Dorsum without secretion, but there is a compact, short, cottony fringe all around from marginal wax tubes. Size of mature specimens about 1.33 mm. × 1 mm., roundly elliptical in shape. On dorsum there is a submarginal row all around of strong, dark, acute spines, projecting considerable above and beyond case, nine or ten on each side. There is also a subdorsal row

on each side of strong, similarly-coloured, but shorter, spines, ten to twelve in number; nearer the medio-dorsal line there are four pairs of spines on the thorax, and a pair on abdominal segments 1, 2, 3 and 7, respectively. Vasiform orifice prominently elevated on an oblique, subconical, truncated protuberance, the subcordate orifice opening directly upwards. The operculum is similar in shape to orifice, which it nearly fills. Lingula obscure. There is a narrow, more or less evident marginal rim, composed of the prominent wax tubes, which are bluntly rounded distally, the incisions between them being moderately deep and acute On ventral surface rudimentary legs may be readily distinguished.

Adults unknown.

Specimens collected by Mr. C. L. Marlatt, Garolt, Java, December 7, 1901, on *Citrus*, sp., and Rose. Eggs and pupal stages described from numerous specimens; larvæ from two specimens. This species is closely related to Maskell's *piperis* from Ceylon, but differs in the number and arrangement of spines in the vasiform orifice, and in the fact that the eggs of *spinifera* are distinctly marked with polygonal areas, whereas those of *piperis* are striated. Types in U. S. National Museum.

TWO REMARKABLE NEW COCCIDÆ.

BY T. D. A. COCKERELL, EAST LAS VEGAS, N. M.

Of the two Coccidæ now described, the first is the type of a very peculiar new genus; the other is a very beautiful and interesting lac-insect.

Stictococcus, n. g.—An aberrant genus of Lecaniinæ, with the anal orifice in the middle of the back, not connected with the hind margin by a slit or groove. Anal ring with six hairs in larva; none in adult. Anal plates so modified in adult as to be unrecognizable. Legs small, but well developed. Antennæ with 5 or 6 joints. Margin with long bristles, and flattened bifid or palmate plates or spines. Dorsum with numerous large pits.

Stictococcus Sjostedti, n. sp. (T. D. A. & W. P. Ckll.).

Numerous on small branches. Oval, flattish, about 4 mm. long, 3 broad, and 1½ high; *Lecanium*-like, smooth and shiny, ferruginous to olive-brown; anal orifice in middle of back; dorsal region with two longitudinal rows of large round pits, single and (in two cases) two together: thus, 1, 1, 2, 1, 2, 1, 1, and then a single one in the middle line where the two rows converge. Subdorsal region with a row on each side